Chapter 10
Conclusion

Gurmit Singh

This book explores the new concept of Oncodynamics. It conceptualizes the effects of cancer on the body. The first chapter in the book sets the stage for a disrupted steady-state which is responsible for the genesis of cancer. The subsequent four chapters in this book provide a framework for the physiological changes that occur in the presence of solid tumours. The abnormal secretions of various factors from the cancer cells are largely responsible for physiological changes such as angiogenesis, neurogenesis, inflammation, and lymphedema. Similar effects can also be exasperated by cancer treatments including chemotherapy and radiation.

The primary purpose of this book is to dissociate the physiological effects from those caused by cancer treatment and focus purely on the responses of the body to cancer presence. A better understanding of these cancer-induced changes will provide a forum for new research in regaining physiological homeostasis in the presence of cancer. A number of investigations are already under way which examine the impact of neo-angiogenesis and the manipulation of immune surveillance to combat cancer.

The last four chapters of this book deal with the sequelae of the physiologic changes—namely fatigue, pain, depression, and skeletal responses. The sequelae of the physiological changes are complex and a result of multiple contextual factors. The complexity of the pain sequela is a result of changes not only on the neurogenesis process but also on several factors secreted by both tumour and host cells in addition to involving the immune system. Hence, multiple cell signalling molecules are likely at play.

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In some instances it is the sequelae such as abnormal pain or depression that are responsible for the identification of tumours and a cancer diagnosis. These oncodynamic effects are largely responsible for the quality of life from a biological viewpoint.